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AMENDMENTS TO THE CLAIMS

Claims 1-4 (CANCELLED)

5. (New) An optical transmitter comprising:

a first encoder that generates a differentially encoded signal from a data signal;

a second encoder that generates an electric RZ (return-to-zero) differential signal as a RZ signal in an electric area from the differentially encoded signal; and

a Mach-Zehnder interferometer type intensity modulator that generates an optical RZ-DPSK (differential phase shift keying) signal as an RZ signal in an optical area based on the electric RZ differential signal.

6. (New) The optical transmitter according to claim 5, wherein

the optical RZ-DPSK signal is modulated by a differential phase of (0, p).

7. (New) The optical transmitter according to claim 6, wherein

the differentially encoded signal includes two signals of a positive phase differential signal and a reversed phase differential signal obtained by inverting an output of the positive phase differential signal, and

the electric RZ differential signal includes a positive phase RZ differential signal obtained by outputting the positive phase differential signal in synchronism with a clock signal, and a reversed phase RZ differential signal obtained by outputting the reversed phase differential signal in synchronism with the clock signal.

8. (New) The optical transmitter according to claim 7, wherein
- the positive phase differential signal is an inverted output of an exclusive OR of a one-bit delayed output from the own apparatus and the data signal, and
- the reversed phase differential signal is a non-inverted output of the exclusive OR.